

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/829,644	CHHABRA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kim Huynh	2182	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 3/3/05 and interview on 4/12/05.
2. ☒ The allowed claim(s) is/are 1-25.
3. ☒ The drawings filed on 4/9/01 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.   |

*tl*

*B*

### **EXAMINER'S AMENDMENT/COMMENTS**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Matthew J. Blecher on April 12, 2005.

The examiner, upon review of applicant's remark, suggested and Mr. Blecher agreed to amend the independent claims 1, 8, 15 and 22 to include the limitation the first memory and the second memory are link lists of the transmit engine as argued in order to put the application in condition for allowance.

The application has been amended as follows:

**Amendment claims 1, 8, 15, and 22 as per attached sheets.**

### ***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance:

Claims 1, 8, 15, and 22 recite, inter alia, a method and apparatus for providing efficient use of a transmit engine having step of loading a first memory to provide information to drive the engine to direct the packet therefrom, marking the first memory

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as busy and directing the packets in accordance with the information and direct additional packets to a second memory while the first memory is marked busy wherein the first and second memories are link list of the transmit engine.

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571) 272-4147.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

A handwritten signature in black ink, appearing to be 'Kim Huynh', with a long horizontal stroke extending to the right.

Kim Huynh  
Primary Examiner  
Art Unit 2182

KH  
4/12/05

CLAIMS

What is claimed is:

- 5           1.     (Currently Amended) A method for providing efficient use of a transmit engine in transmitting packet directing information, said method comprising the steps of:
- a)     loading a first memory with packet directing information, said first memory adapted to provide information to drive a transmit engine to direct
- 10     packets therefrom;
- b)     provided said loading of said step a) is completed, marking said first memory as busy and directing said packets according to said packet directing information; and
- c)     provided said first memory is marked as busy, directing additional
- 15     packet directing information to a second memory such that said second memory is adapted to be loaded with said additional packet directing information without interrupting said first memory, said second memory adapted to provide information to drive said transmit engine to direct packets therefrom, wherein said first memory and said second memory are linked lists
- 20     of said transmit engine.

            2.     (Original) The method as recited in Claim 1 further comprising the steps of:

d) provided said first memory has completed directing packets to hardware according to said packet directing information, marking said first memory as free;

5 e) provided said loading of said step c) is completed and said first memory is marked as free, marking said second memory as busy and directing said packets according to said additional packet directing information.

3. (Original) The method as recited in Claim 2 further comprising the step of:

10 f) provided said second memory is marked as busy, directing additional packet directing information to said first memory such that said first memory is adapted to be loaded with said additional packet directing information without interrupting said second memory.

15 4. (Original) The method as recited in Claim 3 further comprising a third memory, said third memory adapted to be loaded with said additional packet directing information without interrupting said second memory, said third memory adapted to provide information to drive said transmit engine to direct said packets to hardware.

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5. (Original) The method as recited in Claim 1 wherein a primary memory comprises said first memory and said second memory such that said

first memory and said second memory are partitioned locations of said primary memory.

6. (Original) The method as recited in Claim 5 wherein said primary  
5 memory further comprises a third memory such that said third memory is a  
partitioned location of said primary memory.

7. (Original) The method as recited in Claim 1 wherein said first  
memory and said second memory are linked together to operate as a single  
10 memory.

8. (Currently Amended) A computer system comprising:  
a bus;  
a memory unit coupled to said bus; and  
15 a processor coupled to said bus, said processor for executing a method  
for providing efficient use of a transmit engine in transmitting packet directing  
information, said method comprising the steps of:

a) loading a first memory with packet directing information, said first  
memory adapted to provide information to drive a transmit engine to direct  
20 packets therefrom;

b) provided said loading of said step a) is completed, marking said  
first memory as busy and directing said packets according to said packet  
directing information; and

- c) provided said first memory is marked as busy, directing additional packet directing information to a second memory such that said second memory is adapted to be loaded with said additional packet directing information without interrupting said first memory, said second memory
- 5 adapted to provide information to drive said transmit engine to direct packets therefrom, wherein said first memory and said second memory are linked lists of said transmit engine.

9. (Original) The computer system as recited in Claim 8 wherein

10 said processor performs said method for providing efficient use of a transmit engine in transmitting packet directing information, said method further comprising the steps of:

- d) provided said first memory has completed directing packets to hardware according to said packet directing information, marking said first
- 15 memory as free;

e) provided said loading of said step c) is completed and said first memory is marked as free, marking said second memory as busy and directing said packets according to said additional packet directing information.

20 10. (Original) The computer system as recited in Claim 9 wherein said processor performs said method for providing efficient use of a transmit engine in transmitting packet directing information, said method further comprising the step of:

f) provided said second memory is marked as busy, directing additional packet directing information to said first memory such that said first memory is adapted to be loaded with said additional packet directing information without interrupting said second memory.

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11. (Original) The computer system as recited in Claim 10 further comprising a third memory, said third memory adapted to be loaded with said additional packet directing information without interrupting said second memory, said third memory adapted to provide information to drive said transmit engine to direct said packets to hardware.

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12. (Original) The computer system as recited in Claim 8 wherein said memory unit comprises said first memory and said second memory such that said first memory and said second memory are partitioned locations of said memory unit.

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13. (Original) The method as recited in Claim 12 wherein said memory unit further comprises a third memory such that said third memory is a partitioned location of said memory unit.

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14. (Original) The method as recited in Claim 8 wherein said first memory and said second memory are linked together to operate as a single memory.



15. (Currently Amended) A computer-usable medium having computer readable program code embodied therein for causing a computer system to perform the steps of:

5 a) loading a first memory with packet directing information, said first memory adapted to provide information to drive a transmit engine to direct packets therefrom;

b) provided said loading of said step a) is completed, marking said first memory as busy and directing said packets according to said packet  
10 directing information; and

c) provided said first memory is marked as busy, directing additional packet directing information to a second memory such that said second memory is adapted to be loaded with said additional packet directing information without interrupting said first memory, said second memory  
15 adapted to provide information to drive said transmit engine to direct packets therefrom, wherein said first memory and said second memory are linked lists of said transmit engine.

16. (Original) The computer-usable medium as recited in Claim 15  
20 wherein said computer readable program code embodied therein for causes a computer system to perform the steps of:

d) provided said first memory has completed directing packets to hardware according to said packet directing information, marking said first memory as free;

e) provided said loading of said step c) is completed and said first  
5 memory is marked as free, marking said second memory as busy and directing said packets according to said additional packet directing information.

17. (Original) The computer-usable medium as recited in Claim 16 wherein said computer readable program code embodied therein for causes a  
10 computer system to perform the step of:

f) provided said second memory is marked as busy, directing additional packet directing information to said first memory such that said first memory is adapted to be loaded with said additional packet directing information without interrupting said second memory.

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18. (Original) The computer-usable medium as recited in Claim 17 further comprising a third memory, said third memory adapted to be loaded with said additional packet directing information without interrupting said second memory, said third memory adapted to provide information to drive said  
20 transmit engine to direct said packets to hardware.

19. (Original) The computer-usable medium as recited in Claim 16 wherein a primary memory comprises said first memory and said second

memory such that said first memory and said second memory are partitioned locations of said primary memory.

20. (Original) The computer-usable medium as recited in Claim 19  
5 wherein said primary memory further comprises a third memory such that said third memory is a partitioned location of said primary memory.

21. (Original) The computer-usable medium as recited in Claim 15  
10 wherein said first memory and said second memory are linked together to operate as a single memory.

22. (Currently Amended) A method for providing efficient use of a transmit engine in transmitting packet directing information, said method comprising the steps of:

- 15 a) loading a first memory with packet directing information, said first memory adapted to provide information to drive a transmit engine to direct packets therefrom, said first memory residing in a partitioned location of a primary memory;
- b) provided said loading of said step a) is completed, marking said  
20 first memory as busy and directing said packets according to said packet directing information;
- c) provided said first memory is marked as busy, directing additional packet directing information to a second memory such that said second

- memory is adapted to be loaded with said additional packet directing information without interrupting said first memory, said second memory adapted to provide information to drive said transmit engine to direct packets therefrom, said second memory residing in a partitioned location of said
- 5    primary memory, wherein said first memory and said second memory are linked lists of said transmit engine;
- d)    provided said first memory has completed directing packets to hardware according to said packet directing information, marking said first memory as free;
- 10        e)    provided said loading of said step c) is completed and said first memory is marked as free, marking said second memory as busy and directing said packets according to said additional packet directing information; and
- f)    provided said second memory is marked as busy, directing
- 15    additional packet directing information to said first memory such that said first memory is adapted to be loaded with said additional packet directing information without interrupting said second memory.

23.    (Original) The method as recited in Claim 22 further comprising a
- 20    third memory, said third memory adapted to be loaded with said additional packet directing information without interrupting said second memory, said third memory adapted to provide information to drive said transmit engine to direct said packets to hardware.

24. (Original) The method as recited in Claim 23 wherein said primary memory further comprises a third memory such that said third memory is a partitioned location of said primary memory

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25. (Original) The method as recited in Claim 22 wherein said first memory and said second memory are linked together to operate as a single memory.